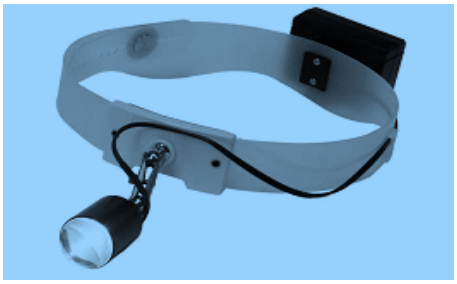
ENT Instruments

Instruments for ENT Examination

Head Mirror with adjustable Head band

Used to focus the light from the light source for examination of the patient.

Description: Concave mirror with a focal length of 23 cm, diameter of mirror is 9 cm and size of hole is 2 cm diameter. The hole of mirror comes in front of pupil of right eye and light is focused with closed left eye to have a binocular vision



Clar's head Light

an electric head light, handy, more useful and gives strong light for examination or for operations

Bull's Eye Lamp

Uses: a source of light and heat.

Description: a 100 watt milky bulb and a convex lens with focal length of 45 cm, through which light passes on to the mirror. The lamp is placed 30 cm behind the left ear of the patient.

Thudicum's Nasal Speculum

Uses

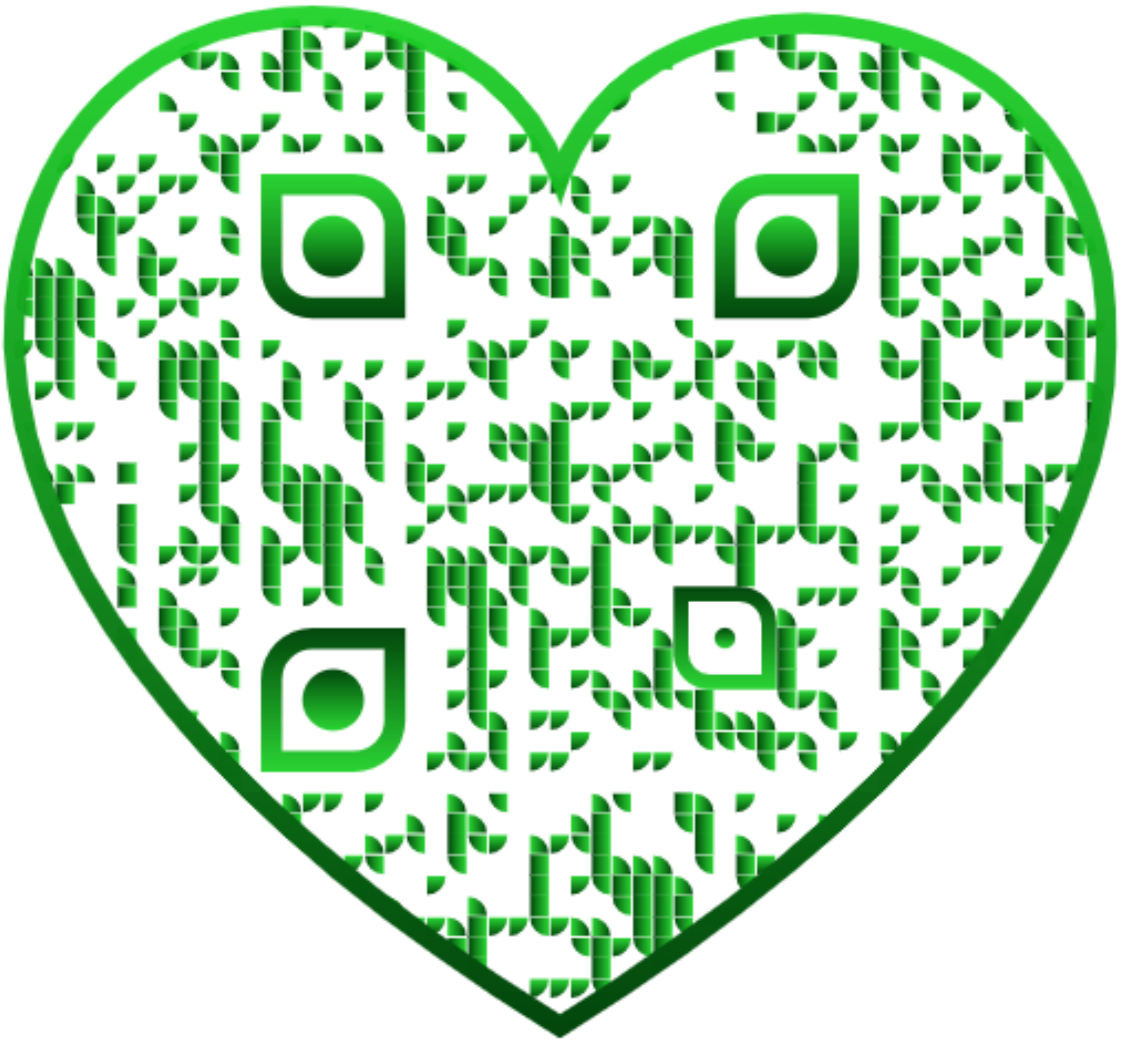
a. Diagnostic: Anterior rhinoscopy—nasal septum, Little's area, lateral wall of nose, nasal cavity
b. Therapeutic: removal of foreign bodies, antral wash, nasal packing, surgical procedures inside the nose.

Correct method of holding nasal speculum is in the left hand suspended over the crooked left index finger, Fixed with the thumb and putting middle and ring fingers on the sides of two prongs.

Killian Nasal Speculum with handle

Uses

a. Diagnostic: Anterior rhinoscopy—nasal septum, Little's area, lateral wall of nose, nasal cavity
b. Therapeutic: removal of foreign bodies, antral wash, nasal packing, surgical procedures inside the nose.



Lack's Tongue Depressor

Uses:

1) Examination of oral cavity and oropharynx
2) To retract lips and cheek and test gag reflex
3) To express pus out of the tonsil and in quinsy.
4) For to check patency of nasal passage (Mirror test)
5) For posterior rhinoscopy
6) For oral cavity procedures like injection of steroids, biopsy, excision of cysts, etc.
7) Remove FB in throat.

Eustachian Tube Catheter (Rose's)

Uses:

1) To test the patency of Eustachian tube
2) To inflate the middle ear
3) To instill medications in the middle ear
4) To remove foreign bodies from the nose
5) As a suction cannula.

Description:

A wide bore beaked metallic cannula 12 to 15 cm in length
Ring on the proximal end indicates the direction of the tip of the catheter after it is in the nasopharynx.

Laryngeal Mirror (Indirect laryngoscopy mirror)

Uses: for Indirect larynogoscopic (IDL) examination of hypopharynx.

Can see

Base of tongue (BOT), valleculae, true and false cords, anterior and posterior commissures, subglottis, aryepiglottic (AE) fold and pyriform fossae, glossoepiglottic fold, pharyngoepiglottic fold.

Can't see:

Post-cricoid region, Apex of pyriform fossa, Ventricles
Undersurface of vocal cords and adjoining subglottic region
Laryngeal surface of epiglottis.

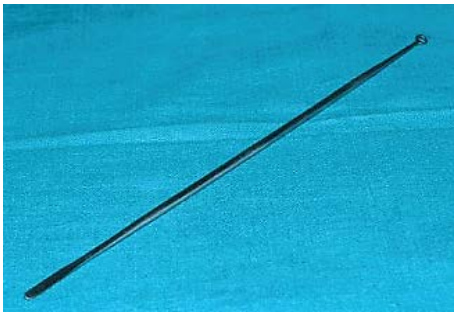
Description: a plane mirror with infinite focal length (Diameter 10–30 mm) available in size 1 to 5.

Post nasal Mirror (Posterior Rhinoscopy Mirror)

Uses: for doing posterior rhinoscopy to examine the nasopharynx.

Can see The posterior end of nasal septum and choanae, Posterior end of inferior and middle turbinates, Roof of nasopharynx, Opening of 9ustachian tube and Fossa of Rosen müller.

Description: a bayonet shaped handle. The mirror should be of an appropriate size so as to pass behind soft palate and reflect sufficient light for the image to be seen. This is a plain mirror and does not magnify the image. The mirror surface is either heated or dipped in savlon (or touched against oral mucosa) in order to prevent fogging during the procedure.
The tongue is depressed gently with a tongue depressor and this mirror is introduced inside like a pen with the mirror facing upwards.



Jobson Horne Probe with Ring Curette

Uses and Description: *It has two ends.*

1) *Serrated end:*
   Remove discharge or foreign bodies from EOM
   Cotton swab carrier and can clean the ear or apply medication.
2) *Ring curette end:* remove wax, FB & debris from ear.

Ear vectis with cerumen spud

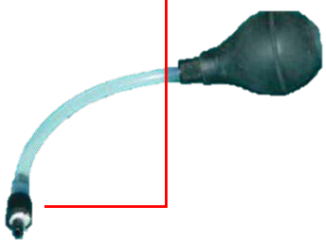
Used to *remove wax and foreign bodies from the ear.*

One end of this instrument has a ring vectis while the other end has a blunt curette.

Otoscope

Uses: Visualize the external auditory canal, tympanic membrane and the middle ear through the tympanic perforation.

Description:
It is a hand-held battery operated instrument. It has convex lens, which gives magnification of 2X-2.5x and also gives good illumination.



Pneumatic Attachment

Uses:

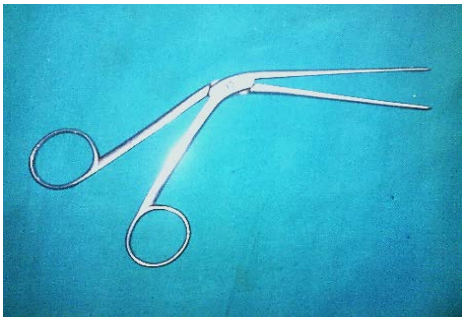
Checking the mobility of the TM. Can also be used for fistula test.

Siegel's Pneumatic speculum

Uses:

- Magnification (2X)
- Mobility of tympanic membrane
- Medicine insufflation
- Suction of discharge
- Fistula test and Gelle's test
- Check middle ear pressure

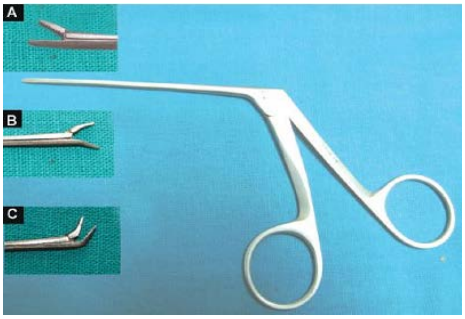
Description: The speculum has a angulated lense, which is parallel to the tympanic membrane with an ear speculum to fit into the canal, which is attached to a rubber tube and a bulb for applying suction or pressure on the drum.



Tilley Nasal Dressing Forceps

Used for

Removal of a foreign body in the nasal cavity
Nasal dressing and also for packing of gauge dressings
Open quinsy
Application of anesthesia
Carry micro instruments



Crocodile Fine Forceps

Used to

Delivery of cotton in aural toilet
Remove the disease like granulations
Cholesteatoma flakes in mastoidectomy operations and also in tympanoplasty and stapedectomy operations

Nasal Dressing Forceps

used for

Nasal dressing or for inserting and removal of packs
Removal of foreign bodies from nasal cavity

Simpson's Aural Metallic Syringe

Used for removal of wax, (otomycotic) debris or foreign bodies from external auditory meatus

Description:

Water at body temperature (37°C) should strike the wall of the meatus and not the wax or foreign body
Complications may be injury to tympanic membrane, vasovagal attack, vertigo and otitis externa

Kidney Dish

Container of medical instruments
In Aural syringing hold by patient

Hartmann Aural Speculum

Used for

Examination or operations in the external ear, tympanic membrane and middle ear.
Protect the canal from surgery by inserting instrument.

It should be introduced gently by rotation by pulling the pinna upwards, backwards and outwards in aduls and downward and outward in children to straighten the meatus

Rosen aural speculum *(Ear Speculum with Cut)*

Used to

Inspect the external auditory meatus (EAM) and tympanic membrane ™ in cases of tympanoplasty, tympanotomy and stapedectomy operations.
Its black color prevents reflection of light

Local Anesthetic Sprayer

Used to spray 10 percent xylocaine on to various areas such as nose, throat and pharynx for examination or minor surgical procedures

Operating Microscopy

Fig. 1.7A: Hartmann tuning fork

Fig. 1.7B: Gardiner tuning fork

Tuning fork (Hartmann's or Gardiner Brown)

Used for

Testing the type of hearing loss, whether conductive or sensorineural hearing loss

Mostly 512 Hz tuning fork is used because it falls in mid speech frequency and its sound lasts longer because of its slow decaying and it produces minimal overtones.
Various tuning forks are 128 Hz, 256 Hz, 512 Hz, 1024 Hz,2048 Hz, 4056 Hz

Barany noise box

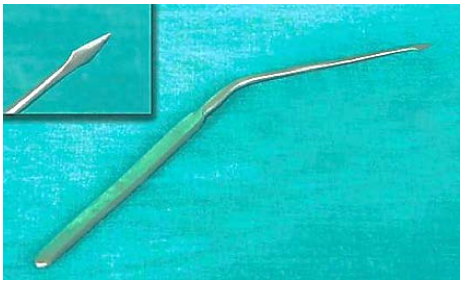
Masking one ear to examine the other ear

Dissecting Forceps (nontoothed)

1) To hold structures and restrict their movement
2) To hold small swabs

Dissecting Forceps (toothed)

To grasp object or tissue and move or release it



Politer Myringotomy Knife

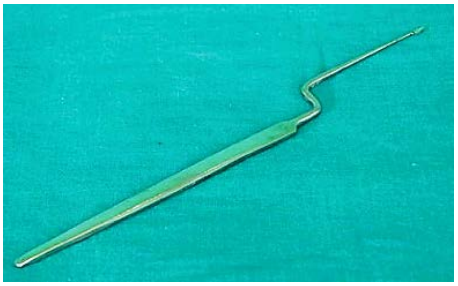
Used to

Give a cut in TM in secretory otitis media and unresolved acute suppurative otitis media (ASOM)

Also used in uncinectomy operation in functional endoscopic sinus surgery (FESS)

The incision may be in the *anteroinferior* quadrant for serous otitis media or *posteroinferior* quadrant for acute otitis media.

The incision is radial for serous otitis media and circumferential for acute otitis media. Ventilation tube may be inserted on this incision if required in serous otitis media.



Bayonet Myringotomy Knife

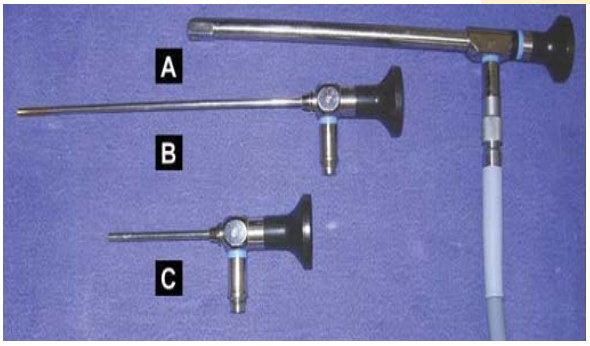
Used in secretory otitis media and ASOM for giving incision in TM

Tilley Lichwitz Antrum Trocar with cannula

Used

Doing proof puncture through inferior meatus or through canine fossa in chronic maxillary sinusitis.

For antral wash out



Rigid Endoscope

A. Laryngoscope

B. Nasal endoscope

Uses:

Examine Nose and postnasal space

Diagnostic or functional endoscopic sinus surgery (DESS or FESS) in cases of Chronic sinusitis, Nasal polypi, Cerebrospinal fluid (CSF) rhinorrhea.

C. Oto-endoscope: examination of ear

Fibroptic Nasal/Nasolaryngeal endoscope

Flexible Fibroptic Endoscope

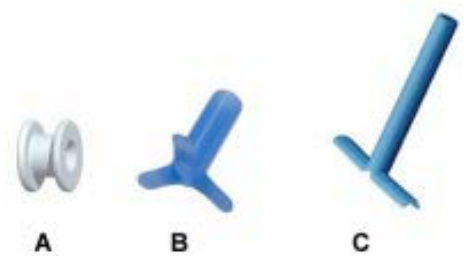
Examine Nose, postnasal space, pharynx and larynx.

Zollner's Knife

used to

give cut in the deep meatal skin for making tympanomeatal flap and in stapedectomy operation

Zoellner Suction Tube for ear



Grommet tubes (ventilation tube)
Ventilation of middle ear (spare the function of EuT)
T-tube is used for longer term and needs skillful hands: down syndrome, cleft palate, adult ear that refuses grommet spontaneously within 6 months

Asch's Forceps
Used to
Treat fractures of nasal septum

Walsham's Forceps
used to
Disimpact and reduce the nasal bone fractures
In rhinoplasty operation

Hearing Aids

Definiton: Sound amplification systems helping the deaf patient to overcome his deafness.

Types:

1. Air conduction HA: Behind the ear HA, In the ear HA.
2. Bone conduction HA: Bone anchored HA.
3. Cochlear nerve stimulator: Cochlear implant

Indications:

1. Congenital deafness
2. Acquired deafness
3. Bilateral profound sensory Hearing loss: cochlear implant

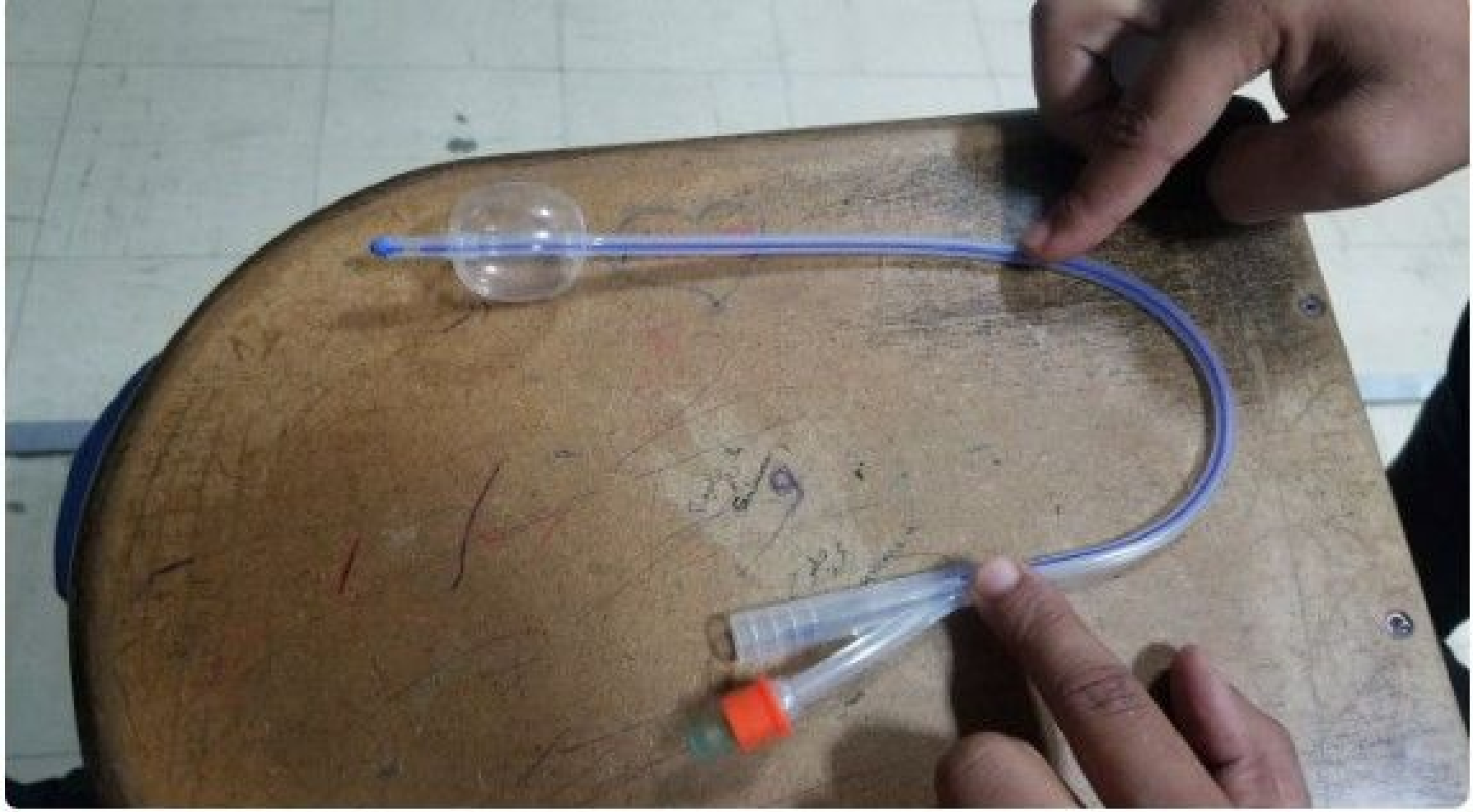
Behind the ear hearing aid

Bone Anchored hearing aid

Cochlear implant

Anterior nasal packing " merocel tampon "
more common used for anterier nasal epistaxis

1 م 3:41



inflatable ballon or foley's catheter uses for packing of posterior nasal epistaxis

د.بلقيس الجمرة

3:41 م 1

Crocodile ear forceps

same as above 👆🏻
except it has a very small opening to avoid any trauma of EAC during FB removal

2 3:41

Aural Syringe

Name: ear(aural) syringe
Composition:made of stainless steel
*Capacitor
*Piston with one ring at end
*Two other rings
*shield
*Nosum
Uses:
1-wax removal (ear wash)
2-Foreign body removal
Contraindication:
1-Pain
2-vertigo
3-infection
4-perforated TM
Complication:
1-infection
2-Syncope attack

2 ₽ 3:41

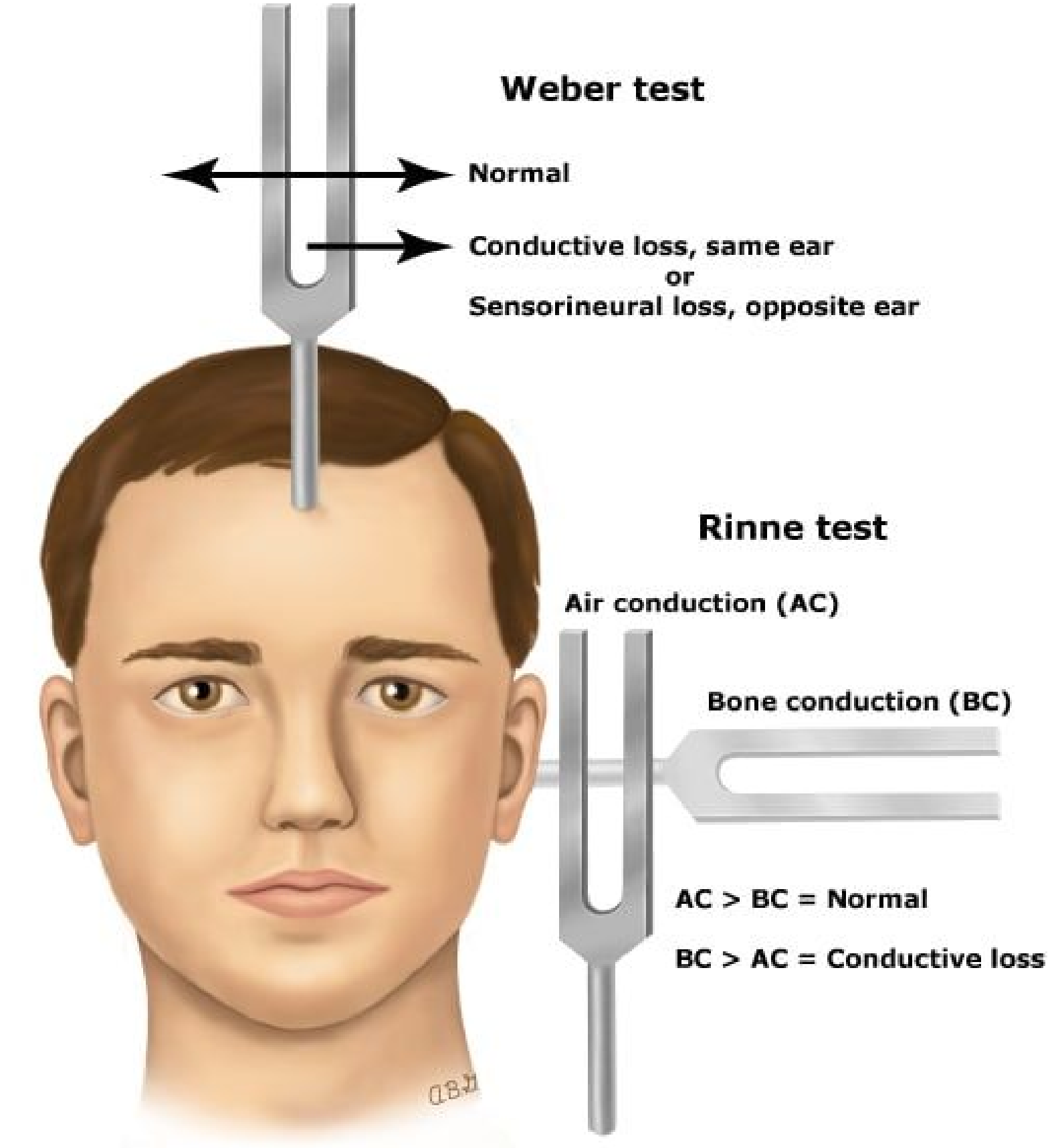
Tool: Otoscope

Name: Otoscope
Composition: metalic part made of stainless steel for handling and has batteries container
rotating switch
ear piece composed of 2 ends : lens (2-3 magnifying power) and aural speculum
Uses:
1- examination of the external auditory canal
2-examination of the TM
3-examination of the middle ear when the TM is perforated
TM perforation types:
1-Central(safe and its anterior/poeterior/ subtotal)
2-Marginal(unsafe can cause ostitis)
3-Attic(unsafe)

2 3:41

Siegle pneumatic otoscope

هشام دائل, 3:41 م 1


Weber test
Normal
Conductive loss, same ear
or
Sensorineural loss, opposite ear
Rinne test
Air conduction (AC)
Bone conduction (BC)
AC > BC = Normal
BC > AC = Conductive loss

Metallic type

2 م 3:41

Tunning fork test

Use for Rinne test and Weber's test
To detect the type of hearing loss
To make an approximate estimate of the degree of hearing
loss.

هشام دائل, 3:41 م 1

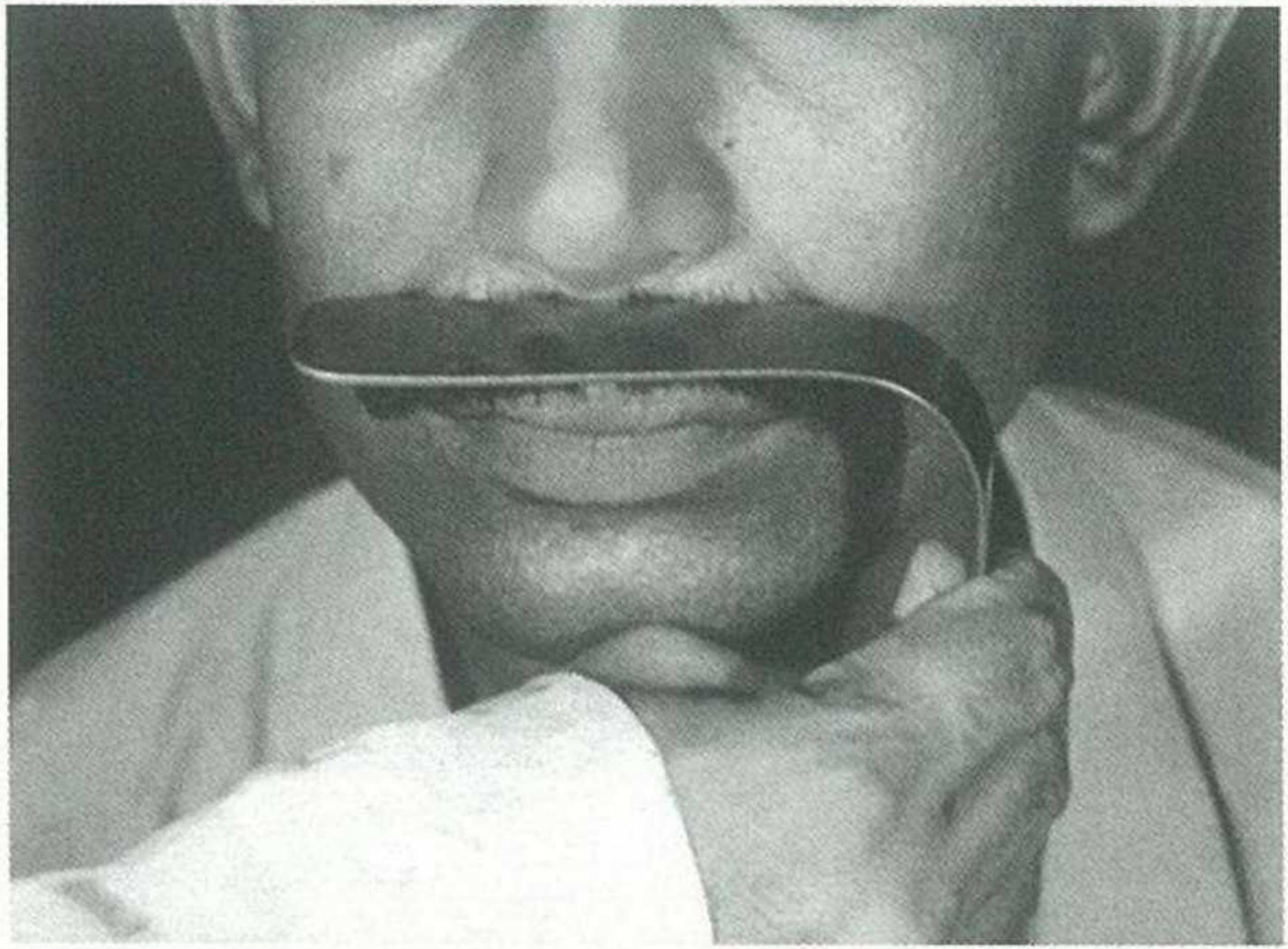


Figure 74.9

Testing the patency of nose. Note the area of mist formation on the tongue depressor when patient exhales from nose.

Spatula test :
use for investigation of choanal atresia

هشام احمد, 3:41 م 1

Aural speculum

Type
1. Plastic aural speculum
2. Metalic aural speculum

Uses:
a. Examination of the external ear canal and tympanic membrane
b. Removal of wax, foreign body, otomycosis or ear discharge
c. In operative procedures like myringotomy, myringoplasty, stapedotomy, stapedectomy

هشام دائل, 3:41 م 1

Ear otoscope

used to visualize
the external auditory canal, tympanic
membrane a

هشام دائل, 3:41 م 1

Siegle pneumatic otoscope

Use
a•Siegelization
b. Fistula test
c. Examination of external ear canal and tympanic membrane.

هشام دائل, 3:41 م 1

Fig. 2.1: Thudicum nasal speculum

Thudicum nasal speculum
Uses:
a. Diagnostic: Anterior rhinoscopy—nasal septum, Little's
area, lateral wall of nose, nasal cavity
b. Therapeutic: removal of foreign bodies, antral wash,

هشام دائل, 3:41 م 1

Fig. 1.30A: Sheehy type grommet

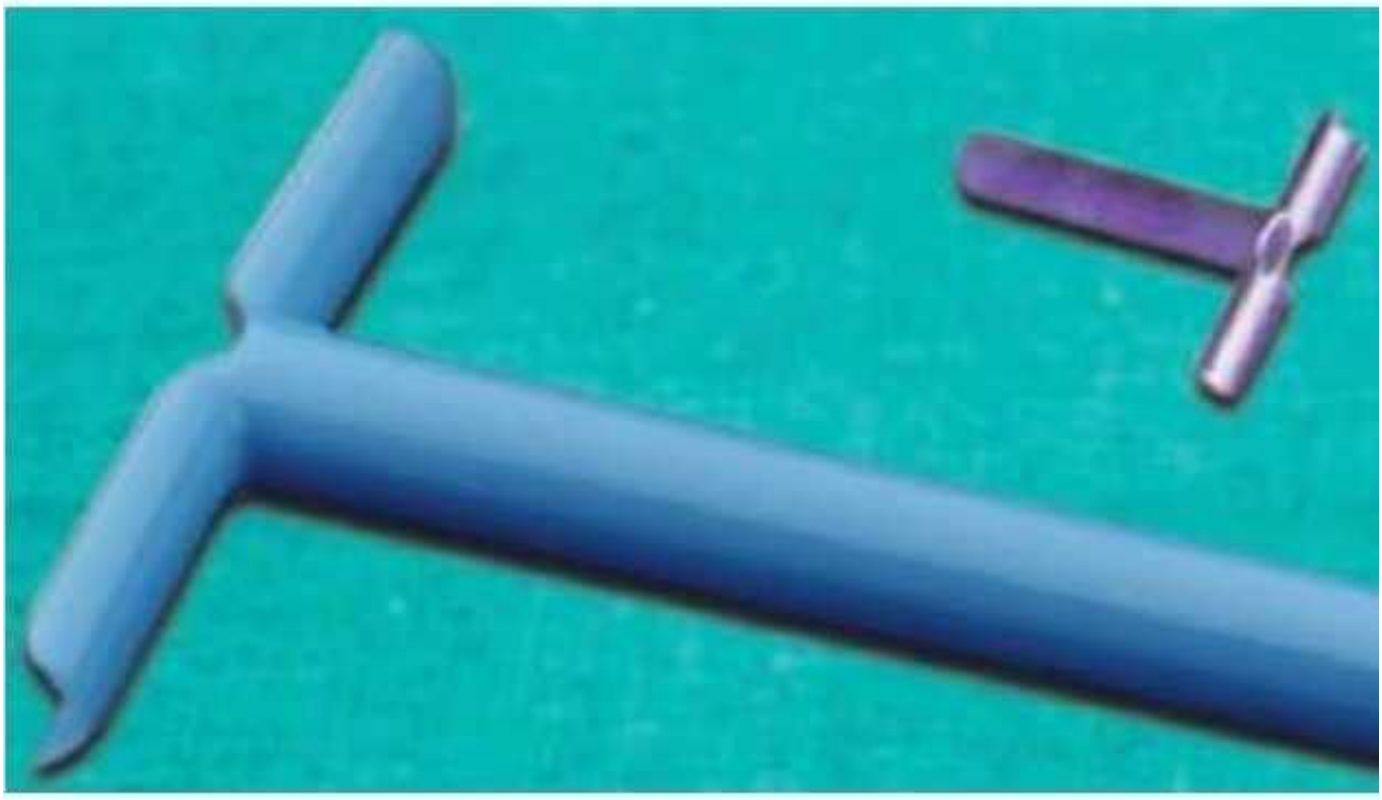


Fig. 1.30B: Goode 'T' tube

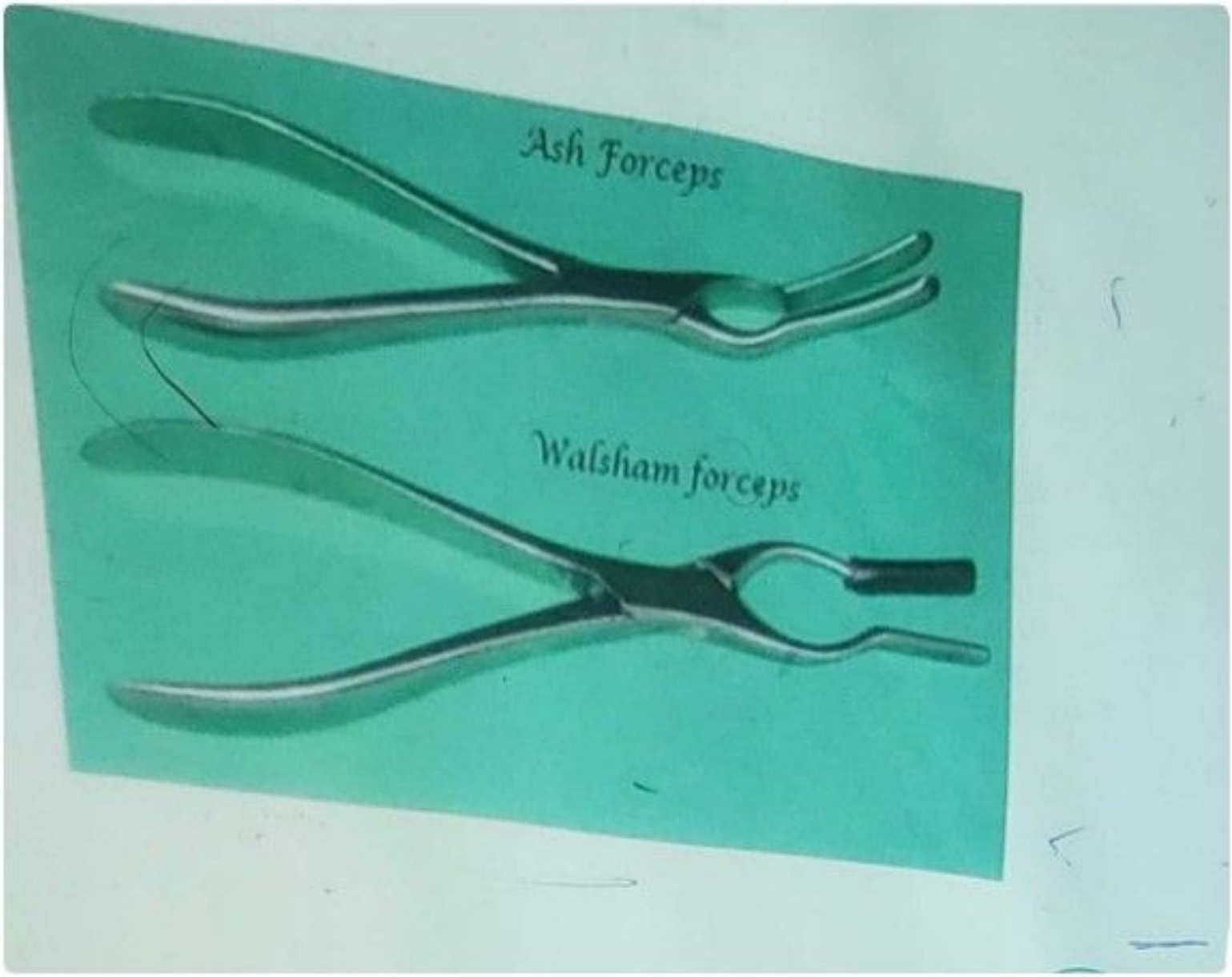
Myringotomy nife

used to make an incision on the tympanic
membrane for serous otitis media or unresolved acute otitis
media

هشام دائل, 3:41 م 1

Silastic cuffed Tracheostomy tube

هشام دائل, 3:41 م 1



Asch septal forceps
Used to reduce fractured nasal septum.
Walsham forcep
Used to refracture and realign
the nasal bones
Smaller in size

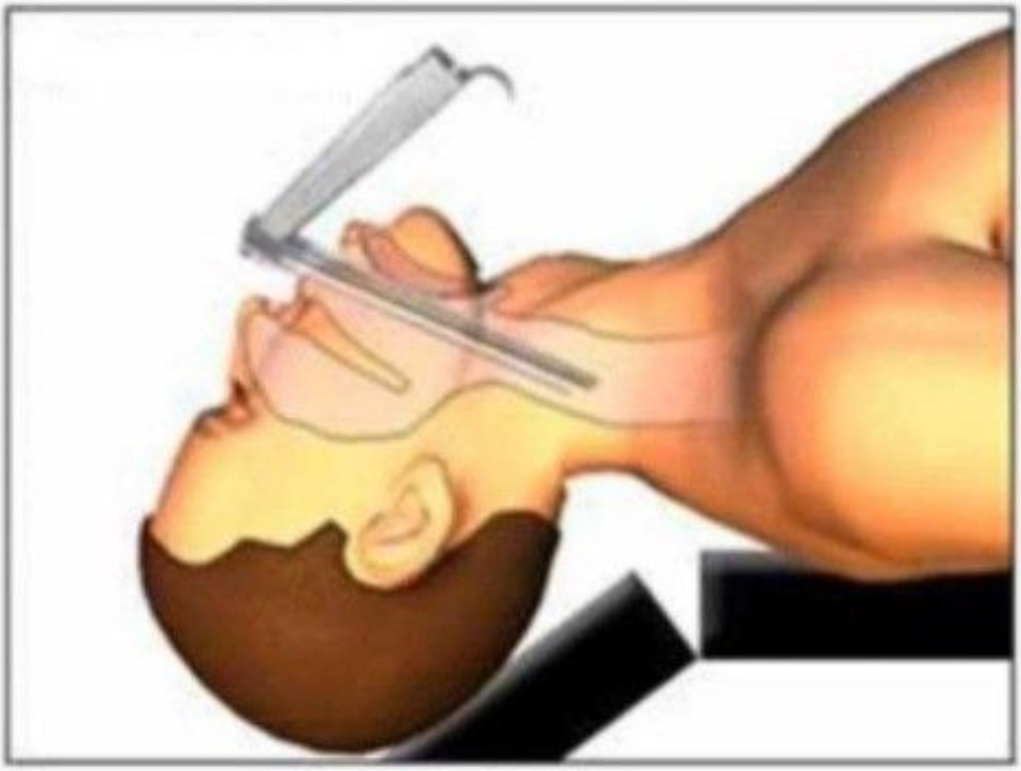
هشام دائل, 3:41 م 1

Flexible nasopharyngoscope

هشام دائل, 3:41 م 1

Ear washing syring
Uses:
a. To remove softened wax
b. To remove foreign body (not impacted)
.
Contraindications:
a. Perforated tympanic membrane
b. Otitis externa
c. CSF otorrhea
d. foreign body impacted
e. Atrophic or thinned out tympanic membrane.

Complications:
a. Tympanic membrane rupture
b. Vasovagal attack
c. Injury to the external auditory canal
d. Vertigo due to stimulation of labyrinth.



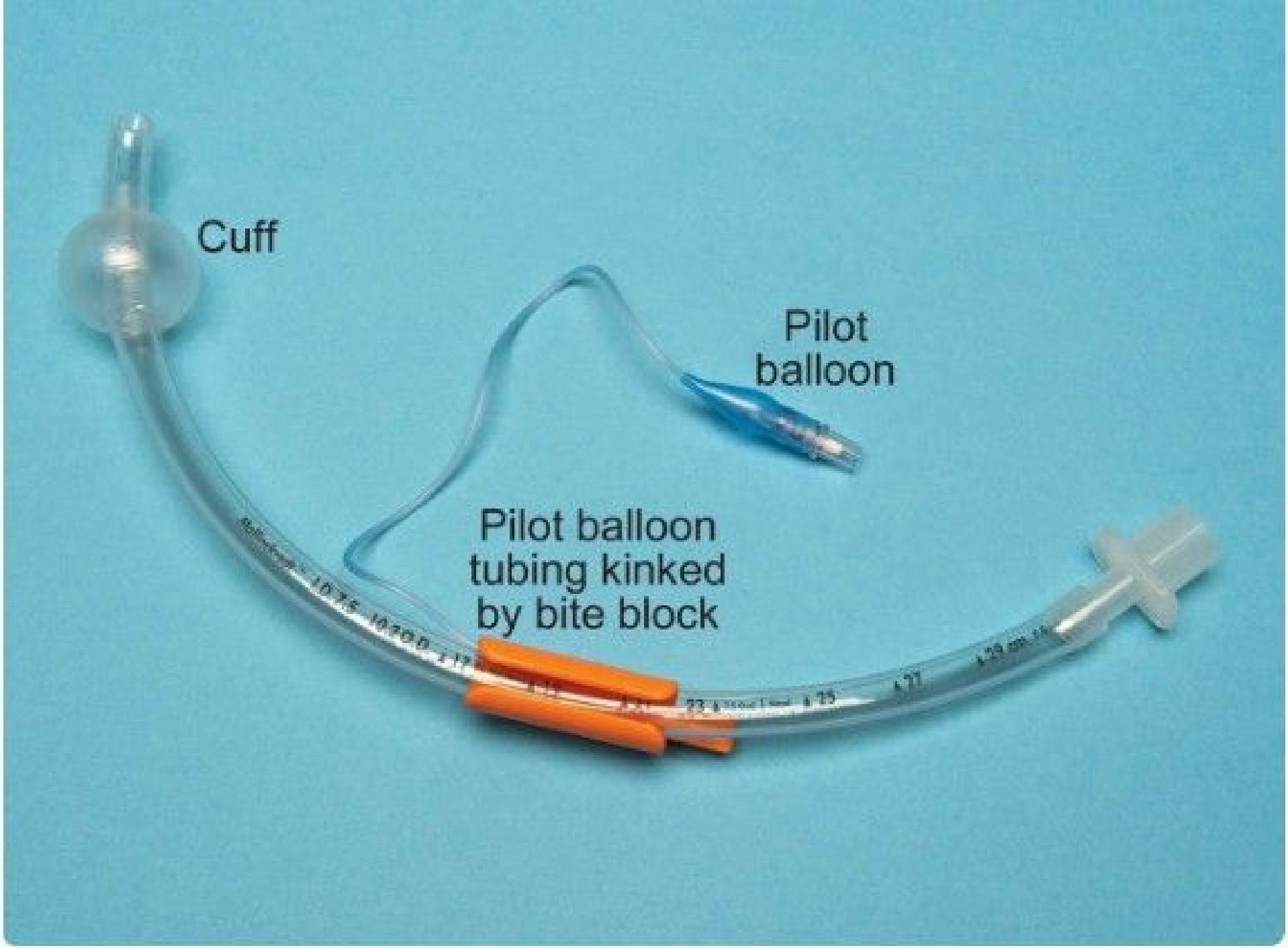
Direct laryngoscopy..
indication :-
Diagnostic
-To examine the larynx.
- To assess a laryngeal tumour..

Therapeutic
-To remove FB froma larynx .
-All uses of MLS.

Contraindication:-

- penetrating trauma to the upper airway.
- Trismus
- infections, burns, or anaphylaxis.
- Cervical fracture
- Kyphosis

هشام دائل, 3:41 م 1



Endotracheal Tube ..

1 3:41 م هشام دائل,